## **INTERVIEW SUMMARY**

An interview took place on April 5, 2006. Applicants' attorney Jason Stowe discussed the substantive differences between the prior art and the claimed invention with Examiners Joseph Thomas and Vanel Frenel. Applicants' attorney and the Examiner further discussed proposed amendments to the independent claims, in particular, capturing the taxonomy feature of the present invention.

## **REMARKS**

This Preliminary Amendment is submitted with a Request for Continued Examination.

Claims 1-7 and 9-18 are pending in the application. The Specification has been amended to supply the application serial number for a cross-referenced application that was unavailable at the time of filing. Claims 1-7 and 9-18 have been amended. Claims 1, 7, 13 and 15 are the independent claims. An Information Disclosure Statement is submitted herewith. The following remarks, along with the present claim amendments, are believed to be fully responsive to the Final Office Action mailed on December 29, 2005.

Initially, Applicants would like to graciously thank the Examiner for the courtesies extended their attorney during the interview of April 5, 2006.

## 35 U.S.C. § 103 Rejections (and anticipated § 102 rejection)

Claims 1-7 and 9-18 stand rejected under 35 U.S.C. § 103 in view of *Pattichis* (Neural Network Models in EMG Diagnosis; May 5, 1995) and *Gulati* (U.S. Patent No. 6,780,589) and further in view of *Cook* (U.S. Patent No. 8,804,661). In the interview the Examiner indicated that he believed a rejection under 35 U.S.C. § 102 based on *Pattichis* may even be proper. Thus,

Applicants address *Pattichis* both alone as well as in the combination as applied in the Office Action.

Applicants respectfully submit that claims 1, 7, 13 and 15, as amended, as well as the claims dependent upon them, are patentable over the cited prior art.

Unlike prior art systems, the system and methods of claims 1, 7, 13 and 15 elicit from a user and/or store, as the case may be, a comprehensive snapshot of such user's health by automatically doing what health care professionals used to routinely value as the foundation of all health care – "listening to the patient." Such a comprehensive medico-health snapshot can be articulated by a user, using, for example, the terms of a novel medical taxonomy. Such a taxonomy is designed to be understandable by non-medical professionals and to also be ultimately transformable into a data structure capable of being stored in a computer for the purposes of searching and analysis.

As described in the specification, such a taxonomy can be used as the common semantic reference frame in which a user can be queried as to her health status and in whose terms she can answer. As described in the Specification, such a "taxonomy is a language or lexicon that is detailed enough so as to allow the system to store a comprehensive description of the user which facilitates finding a medically meaningful similar users, and at the same time comprises language that is natural enough to allow even the uneducated and unsophisticated user to meaningfully articulate his or her own medical state of being." *Specification* at ¶ 59. In one exemplary embodiment, the task of inputting responses to questions can be facilitated by prompting a user to articulate their health profile, and then enter any medical/health events via an age/gender appropriate graphic interface. *Specification* at ¶ 133, Fig. 34; ¶ 140, Figs. 18-22. An exemplary taxonomy is provided in Exhibit A-1. *Specification* at Exhibit A-1. For ease of computing, for

example, responses in terms of such a taxonomy can be mapped to a substantially orthogonal basis set using, for example, a set of system-function-where triples as provided in Exhibit A-3.

None of the references cited against the claimed invention teach or suggest an invention capable of generating a substantially comprehensive medico-health snapshot of a user by probing a user to articulate responses in terms of a defined substantially comprehensive medico-health taxonomy. *Pattichis*, *Gulati*, and *Cook* are medical testing systems that cover a relatively limited number of human medical systems as opposed to a substantially comprehensive medico-health snapshot of an individual. Moreover, none of these references teaches or suggests the use of a specialized taxonomy via which to query a user and elicit responses therefrom. Thus, none of the cited references allow a system to simply "listen to the patient."

Pattichis does not suggest or disclose using a defined taxonomy to prompt a user to articulate their complete health snapshot. Pattichis teaches the use of electromyography (EMG) and pattern recognition algorithms to diagnose neuromuscular disorders. Pattichis at 486. EMG is useful for diagnosing neuromuscular disorders because it measures the electrical activity in muscles. Electrical signals are acquired with needles inserted into the muscle itself. Pattichis at 486. No part of Pattichis teaches or suggests querying a user in terms of a substantially comprehensive taxonomy. Pattichis is concerned only with measuring simple muscle activity via electrodes — not by drawing on the wealth of information that the patient has in his mind about his condition and his general health state in a systematized manner. Furthermore, Pattichis is unconcerned with any medico-health information outside the realm of neuromuscular disorders. Pattichis, therefore, does not teach or suggest the systems or methods of the independent claims.

Neither *Cook* nor *Gulati* are seen as curing the deficiencies of *Pattichis* as a reference against claims 1, 7, 13 and 15, as amended.

Gulati was cited against the pending claims as allegedly analyzing the medical state of a human being. However, Gulati does not teach or suggest articulating a substantially comprehensive medico-health snapshot of a user by probing a user to articulate responses in terms of a defined substantially comprehensive medico-health taxonomy. Gulati is directed to a system that exposes genetic mutations by measuring the hybridization of oligonucleotides in a biological sample to produce dot spectrograms and statistically processing the dot spectrograms. Gulati at 4:35-54. Measuring the hybridization of oligonucleotides is a specialized biochemical test that acquires medical data in a vastly different way than presenting a series of queries to a user based on a specific medical taxonomy. Furthermore, the Gulati system is limited to discovering genetic mutations. Moreover, Gulati does not seek any articulation from a user as to his own medico-health state of being.

Similarly, Cook does not, whether alone or in combination with either Pattichis or Gulati, disclose articulating a substantially comprehensive medico-health snapshot of a user by probing a user to articulate responses in terms of a defined substantially comprehensive medico-health taxonomy. Cook is directed to a drug profiling apparatus and method. In its broadest terms, Cook discloses a system to measure the neurological effects of drugs on the body. The reference measures such effects with "novel systems and methods for signal processing, pattern recognition and data interpretation" observable with electroencephalography, or the measure of electronic activity in the brain. Cook at 3:2-7. Pattern recognition and processing in Cook is limited to patterns detectable with electroencephalography. A reference that only acquires data with electronic sensors cannot teach or suggest acquiring data by questioning a user, and having

such user articulate his or her comprehensive health status, via a specialized medical taxonomy. Moreover, regardless of how the *Cook* results are processed, measurement of brain activity alone cannot hope to approach articulating a substantially comprehensive medico-health description of a user.

The Office Action states, at page 4, that Cook suggests a "human being's comprehensive medical state" at 18:8-67. Applicants respectfully traverse. Cook there describes a rat-based experiment to detect drug induced ataxia. Nowhere is there any teaching or suggestion of having a subject articulating a substantially comprehensive medico-health snapshot by probing the user to articulate responses in terms of a defined substantially comprehensive medico-health taxonomy. Moreover, such a feature is not generally known in the art at all. Most modern health care focuses on a particular ailment as being related to or within a particular subsystem. The patient is treated in much the same way as the rats in Cook. A "black box" that has some measurable response (ataxia) to some input or intervention (a drug dose). In contrast, the present invention can be used to treat each human patient as a subjective reality, which is often the best source of information about its own health state of being. Measured findings are but one aspect of a comprehensive medico-health description. Thus, while prior art systems seek to perfect data acquisition and analysis where the patient is essentially an object of observation, the system and methods of the present invention provide techniques to extract data from the patient about his or her health using the patient's subjective perceptions and descriptive capabilities.

Thus, the cited references, whether taken alone or in any combination, do not teach or suggest the systems and methods of claims 1, 7, 13 and 15, as amended, and thus these claims are urged as patentable over the cited prior art. For similar reasons, dependent claims 2-6, 9-12 and 14-15 are also urged as patentable over the cited prior art. Therefore, Applicants

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respectfully submit that the pending claims are now in condition for allowance. Favorable reconsideration is requested.

## **CONCLUSION**

In view of the remarks herein, Applicant believe that each ground for rejection made in the instant application has been successfully overcome or obviated, and that all pending claims are now allowable. Withdrawal of the Examiner's rejections, and allowance of the current application are respectfully requested.

No additional fee is believed necessary for entry of this Amendment. However, the Commissioner is hereby authorized to charge any additional fee to Deposit Account No. 50-0540.

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Respectfully submitted,

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